

**RECORD OF DECISION**  
**Proposed I-75 Widening and Reconstruction from M-102 to M-59**  
**Oakland County, Michigan**

**FHWA-MI-EIS-03-01-F**

## **1. DECISION**

The following sets forth the basis for choosing of the Selected Alternative for the I-75 reconstruction project from M-102 to a point south of M-59 (exit 77) in Oakland County, Michigan (Figure 1). These are logical termini for the proposed project. The Notice of Intent (NOI) to prepare the Environmental Impact Statement (EIS) was issued in the Federal Register June 14, 2002. The Selected Alternative is a lane addition as a High-Occupancy-Vehicle (HOV) lane in the peak hours (approximately four hours a day) and a general-purpose lane for the remaining 20 hours. The lane addition will bring the entire project length to four through lanes in each direction.

The selected alternative will also include improvements to the I-696/I-75 interchange, the 12 Mile Road interchange, the 14 Mile Road interchange, and M-102 ramps. A new drainage system will be constructed as a part of the Selected Alternative, as well. The Selected Alternative will be constructed in stages and will follow the existing I-75 alignment within the project limits. This decision is based upon full consideration of information contained in the Draft DEIS approved December 24, 2003, the Public Hearing held January 27, 2004, the Final EIS approved May 31, 2005, and public and agency comments pertaining to the proposed action, the other alternatives considered, the respective environmental consequences, and issues related to the proposed action. Analysis performed for this ROD, subsequent to the FEIS and discussed more fully herein: 1) confirmed that the Lincoln Bridge will be reconstructed in its same location; and 2) reexamined a noise wall in Hazel Park and found it reasonable and feasible.

An Interchange Access Justification Report has been reviewed and accepted by the FHWA on October 26, 2005. If there are no major changes to the proposed design, final approval will be given upon completion of the environmental process.

## **2. ALTERNATIVES CONSIDERED**

The alternatives are adequately addressed in Section 3 of both the Draft EIS (DEIS) and the Final EIS (FEIS). As noted in Section 1.2 of the Summary of the FEIS, the Selected Alternative is environmentally selected; with positive air quality effects and only a small loss of low-quality wetland acreage (0.4 acres) within the Square Lake Road interchange.

Section 3 of the DEIS described the alternatives evaluated to determine the Selected Alternative. Alternatives were evaluated to address current and projected travel demand, reduce the number of traffic crashes, and rehabilitate the pavement and bridges along I-75. Also considered were the No Build Alternative, Transportation Systems Management (TSM) techniques, Transportation Demand Management (TDM) techniques, Intelligent Transportation Systems (ITS) applications, and mass transit. Development of an additional lane for general-purpose use by all traffic was examined as a Practical Alternative, but was not selected as the Selected Alternative. A number of specific design issues were addressed in the DEIS that were not included in the Selected Alternative. These include:

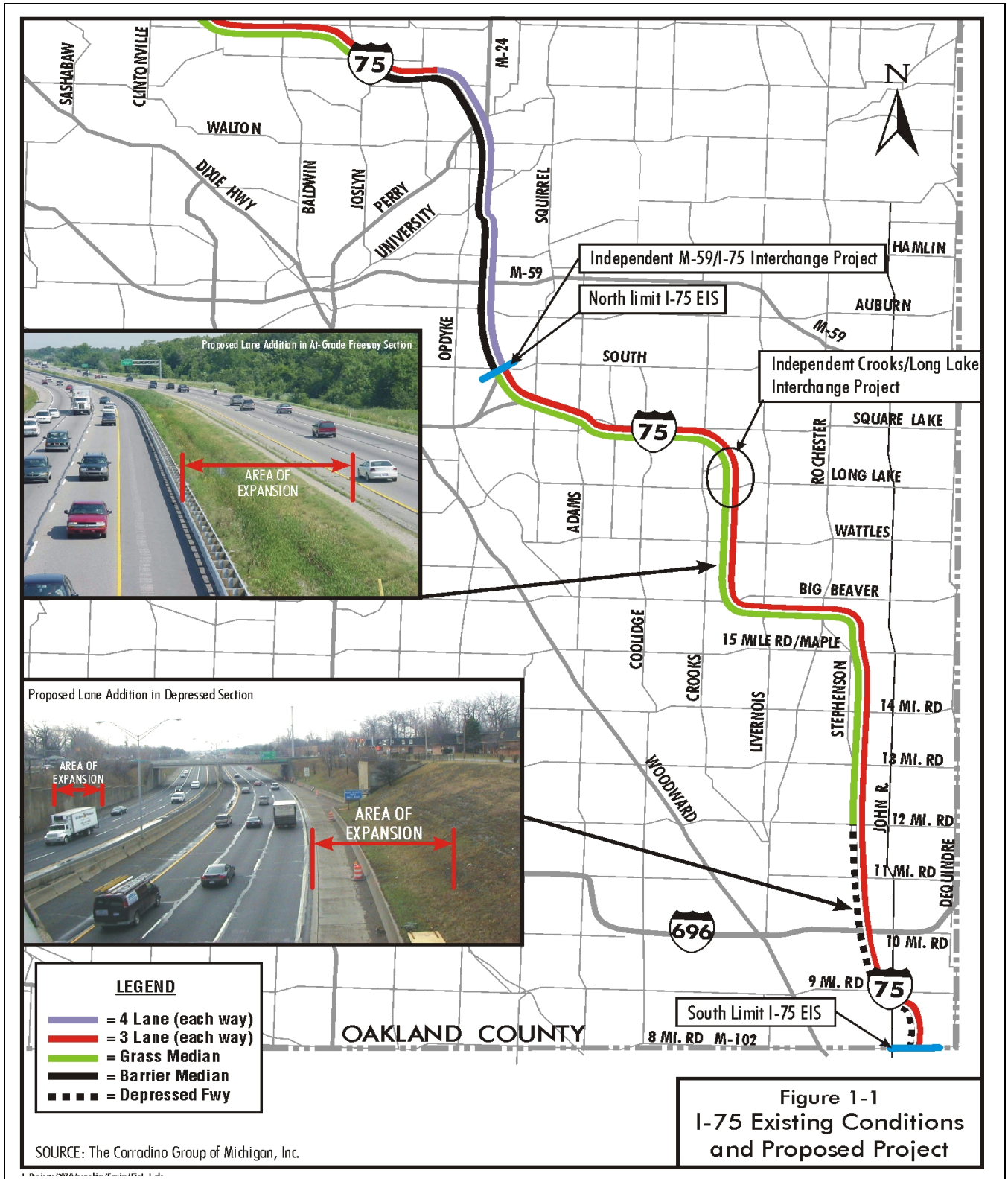


Figure 1  
Figure 1-1 from FEIS

- A 10-foot inside (median) shoulder as part of the Selected Alternative, consistent with American Association of State Highway and Transportation Officials (AASHTO) guidelines. A 12-foot inside shoulder was considered, but was found to have significant socioeconomic and cost impacts. In addition, it had the potential to create safety problems, as the sections adjacent north and south have 10-foot shoulders and will continue to have them.
- Redesigning the Big Beaver curve. The I-75 curve at Big Beaver Road does not conform to current rural standards, but does meet urban standards. The once-rural area is now urbanized. Therefore, redesigning the curve to rural standards is not possible due to extensive socioeconomic impacts and is not included in the Selected Alternative.
- Eliminating the left exit and entrance on northbound I-75 at Square Lake Road. Extensive traffic analysis found that the current ramp configuration functions well and that removing the left exit/entrance would have significant socioeconomic and cost impacts. It would also increase weaving conflicts. Traffic volumes do not support such a change and could interfere with driver expectations. It is not part of the Selected Alternative.
- Consideration was given to reconstructing the 12 Mile and 14 Mile Road interchanges as Single Point Urban Interchanges (SPUIs).
  - Cost and travel demand data indicate the 14 Mile interchange can be reconstructed in its same basic configuration with some additional capacity. Several design options on 14 Mile Road were proposed by MDOT to the Road Commission for Oakland County, the city of Troy, the city of Madison Heights, and representatives of the Oakland Mall. Unfortunately, no consensus on improvements resulted from these meetings. MDOT indicated a continued willingness to participate in discussions related to improvements.
  - At 12 Mile Road two options were examined in the DEIS. The first was to reconstruct the interchange with its same basic configuration, except that the loop ramp in the northwest quadrant would be replaced with a westbound to southbound left turn. This change would allow the southbound off ramp to be shifted away from Stephenson Highway, allowing for more vehicle storage on the westbound approach to that intersection. The second was to reconstruct the interchange as a SPUI. During the design and value engineering phases, the interchange design will be reevaluated.

Several modifications to the DEIS Build Alternative were considered in preparing the FEIS and choosing the Selected Alternative. Each modification was directly responsive to public and agency input. The modifications, as a result of additional analysis and comments, are listed below (see Section 3.9 of the FEIS).

- A recommended safety improvement to shift the northbound on and southbound off ramps serving M-102 (8-Mile Road).
- A modified braiding of ramps on northbound I-75 north of I-696.
- A reconstructed 12 Mile Road interchange, subject to review again during the design and value engineering phases of the project.

## **Description of the Selected Alternative**

A Selected Alternative was identified after the public hearing, when the comment period had ended and all comments had been considered. The Selected Alternative is based on HOV Option C (signing & stripping) within the project limits, as identified in Section 3.8 of the FEIS. This HOV application is consistent with the findings of an MDOT study conducted in 1999 to identify potential HOV lane development locations in southeast Michigan.<sup>1</sup> The Selected Alternative lane addition will be built as shown in Figure 1 and will include:

- Replacing all bridges in the depressed section from north of M-102 to south of 12 Mile Road, as all need to be lengthened to accommodate the lane addition.
- Shifting the northbound on and southbound off ramps serving M-102 (8-Mile Road) to improve safety.
- Widening I-75 bridges north of 14 Mile Road (plus the I-75 bridge over 13 Mile Road) to accommodate the lane addition.
- Improving the 12 Mile Road interchange (ramp modifications) and 14 Mile Road interchange (ramp modifications and widening 14 Mile Road under I-75).
- Maintaining 10-foot inside median shoulders, consistent with the remaining corridor.
- Braiding the ramp north of I-696 (with the relocation of the Dallas Avenue crossover bridge to south of Lincoln Avenue).
- Reconstructing the pedestrian bridges over the depressed section of the freeway, plus a sidewalk addition to the service drive under I-696 on the east side of I-75.
- Constructing a new storm water system in the southern section of the corridor.
- Developing new storm water retention in the northern section of the corridor.

The Selected Alternative:

- Satisfies the Purpose and Need for the project.
- Has the least social, economic and environmental impacts to construct.
- Addresses public, stakeholder, and agency concerns.
- Is the least costly.

## **3. SECTION 4(F)**

### **Section 4(f) Properties**

The Selected Alternative will not use any publicly owned land from a public park, recreational, wildlife or waterfowl refuge, or historic sites.

### **Section 106**

The Selected Alternative will have no effect on any property on, or eligible for, listing in the *National Register of Historic Places* within the approved area of potential effect.

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<sup>1</sup> *Southeast Michigan High-Occupancy-Vehicle (HOV) Feasibility Study Final Report*, Parsons Brinckerhoff Michigan, Inc. for the Michigan Department of Transportation, May 7, 1999.

## **4. MEASURES TO MINIMIZE HARM**

FEIS Section 5 addresses mitigation measures being considered for the Selected Alternative and is based on the information available through November 2005. The project mitigation summary “Green Sheet” is attached and details project specific mitigation.

### **Social and Economic Environment**

Table 4-14 of the FEIS lists 18 individual noise walls that were found to be reasonable and feasible. These walls fall within the communities of Hazel Park, Madison Heights and Troy. In total, approximately 4.9 miles of walls were proposed. Comments on the FEIS led to reconsideration of a wall in Hazel Park on the west side of I-75 north of Woodward Heights Boulevard. The reconsideration led to the conclusion that a wall at that location would be reasonable and feasible, bringing the total number of walls to 19 and the approximate total length to 5.0 miles. See Section 5 (Hazel Park comments) of this document for a more complete discussion. Discussions will continue to be held with the affected public in the vicinity of each wall during the design phase to explain the noise wall construction and potential construction materials used. MDOT will coordinate with local fire departments during the design phase to ensure adequate placement of, and access to, fire hydrants in locations where noise walls are to be constructed.

The proposed lane addition will require no dwelling units, but approximately one acre of land is needed, and two businesses in Hazel Park must be relocated. One business currently encroaches on the existing right-of-way and another is so close that it cannot be avoided. Also in Hazel Park, approximately 16 parking spaces of 340 could be needed from one commercial area, and approximately 17 spaces of 380 spaces could be required from a church.

Right-of-way will be required for the “braiding” of ramps north of I-696. This safety and operational improvement will relocate approximately 23 single-family dwellings and a church. The land needed would be approximately seven acres.

Approximately an acre of right-of-way will be required as six pedestrian bridges are going to be reconstructed. The northern bridge is in Madison Heights. The others are in Hazel Park. The clearances under the bridges must increase (for safety) and reconstruction must be in accordance with the Americans with Disabilities Act (ADA), which requires more gradually sloping ramps and therefore, more land.<sup>2</sup> Steps will be provided where feasible, in addition to the ramps to provide more direct routings for ambulatory persons. The pedestrian bridge at Harry Avenue in Hazel Park could require the relocation of three homes. The relocation impacts of the pedestrian bridges will be refined during the design phase when more detailed information is available.

Storm water pump stations in the depressed section of the corridor will be relocated to other locations within the right-of-way to avoid land acquisition. Storm water detention requirements in the north section of the project could require right-of-way acquisition of up to seven acres in Troy southeast of Rochester Road. Detention will be designed to avoid relocations.

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<sup>2</sup> Draft ADA guidelines under review may allow the option of ramps or elevators. There are issues with regard to elevators with respect to ongoing maintenance, but their implementation may avoid right-of-way acquisition. For more discussion see Section 4.2.2 of the FEIS.

A summary of relocations is presented in Table 1. Adequate housing is available close to the residential units that would be relocated, and sufficient commercial space is also available. Relocations are subject to refinement during the design phase.

**Table 1**  
**Relocation Summary**

IMPROVEMENT	DISPLACEMENTS
LANE ADDITION	2 businesses
RAMP BRAIDING	23 single-family dwellings and one church
PEDESTRIAN BRIDGES	3 single-family dwellings
STORM WATER DETENTION	Land only
TOTAL	26 single-family dwellings, 2 businesses, and one church

Source: The Corradino Group of Michigan, Inc., Rowe, Inc., and Orchard, Hiltz, and McCliment

## **Natural Environment**

In the Square Lake Road interchange, 0.4 acres of wetlands will be directly affected by the project. These wetlands will be replaced by 0.6 acres of wetlands in Armada Township in Macomb County, an approved MDOT wetland mitigation site. A permit will be obtained from the Michigan Department of Environmental Quality (MDEQ) for this compensatory wetland mitigation. A preliminary Wetland Mitigation Plan has been approved by MDEQ.

Mature trees that are determined to be desired and healthy will be preserved within MDOT right-of-way (principally at fence lines), where safety requirements are met. Property owners will be notified before any trees in front of their residences are removed and will be offered replacement trees. Native vegetation will be considered in plantings, wherever possible.

For highway runoff, storm water management facilities will include detention basins and grassed channels or swales to reduce the concentration of road contaminants reaching receiving bodies of water. Ditch check dams will be installed to control runoff velocities. Storm water management will be incorporated into final roadway design. The Selected Alternative will include separation of MDOT storm water south of 12 Mile Road from the combined sewer system that now carries this storm water. Detention will be included in pump stations and possibly within the 12 Mile Road interchange, allowing settling of debris and sediment. Oil/water separators will also be included in the system.

## **Hazardous/Contaminated Materials**

A Project Area Contamination Survey has been completed. One site at 402 South Stephenson Highway has been identified for a Preliminary Site Investigation (PSI) prior to right-of-way acquisition. Any areas of contamination found by that PSI will be marked on design plans.

Additional standard mitigation measures that could apply include:

- Treatment of water from any dewatering operations before pumping to storm drains or surface water discharge points.
- Testing of river bottom sediments to determine proper disposal methods.
- Preparation of underground utility plans to ensure no deep utility cuts will impact any contaminated areas. Any utility cuts in contaminated areas will be reviewed to ensure proper excavation and backfill methods.
- Preparation of a Risk Assessment Plan, which includes a Worker Health and Safety Plan, to reduce dermal exposure and address direct contact issues, if contaminated materials are encountered.
- Closing and abandoning any monitoring wells properly.

## 5. COMMENTS ON THE FINAL ENVIRONMENTAL IMPACT STATEMENT

The FEIS was signed May 31, 2005, made available for agency and public review, and sent to the EPA for filing. The Notice of Availability appeared in the Federal Register Friday, June 17, 2005. The comment period closed on August 5, 2005.

The U.S. E.P.A. stated that the FEIS adequately addressed their concerns. The Michigan Department of Environmental Quality concurred in the identification of the Selected Alternative. A number of businesses and organizations wrote in support of the Selected Alternative including: Automation Alley, HarleyEllis, Merian Financial Group, the Oakland County Business Roundtable, Rehmann Robson, Spaulding DeDecker Associates, the Road Commission for Oakland County, SEMCOG, and the Traffic Improvement Association. MichiVan Commuter Vanpools also supported selection of the “HOV Alternative.” Support for the Selected Alternative was expressed by the cities of Auburn Hills, Troy, Madison Heights, and Royal Oak, as well as Oakland County and the Oakland County Board of Commissioners.

The city of Royal Oak submitted a resolution related to increased traffic on Lincoln Avenue with the proposed braid configuration of the Selected Alternative. The Oakland County Board of Commissioners recommended that MDOT address and mitigate the effect of additional traffic on Lincoln Avenue. This issue is discussed in detail below.

Other comments were provided by: Bloomfield Township, the city of Hazel Park, the city of Ferndale, the city of Madison Heights, the Road Commission for Oakland County, and Transportation Riders United. Below are responses to those FEIS comments.

### **Bloomfield Township – Sound Walls**

Comment: The Bloomfield Township Treasurer states, “Sound Attenuation Walls are a must for any expansion of I-75 through Bloomfield Township” (this would apply between Adams Road and South Boulevard along I-75).

Response: Noise walls have been in place for some years on the east side of the Square Lake interchange. Additional walls were constructed in 2003 west of Squirrel Road (as a separate project from this one). Through analysis, it was found that those walls are still adequate to mitigate noise from the proposed lane expansion. East of Squirrel Road new noise abatement was

considered, but walls were not found to be reasonable and feasible. Supporting documentation is found in Section 4.8.5, Segment 12 (page 4-51) of the FEIS. The only residential exposure between Squirrel Road and Adams Road is on the north side. A patio home development (Adams Woods) constructed its own private noise wall. This wall is effective enough that a new full height MDOT wall outside this private wall would not be feasible or reasonable, when considering the minimal additional noise mitigation the MDOT wall would provide. For these reasons, no additional noise walls in Bloomfield Township are proposed with the Selected Alternative.

### **City of Hazel Park – Sound Walls**

Comment: Comments were received from citizens at the public meeting of July 19, 2005 related to noise, and a letter was received from the City Manager of Hazel Park asking that a sound barrier wall be reevaluated between Woodward Heights and I-696, citing new home construction in the area.

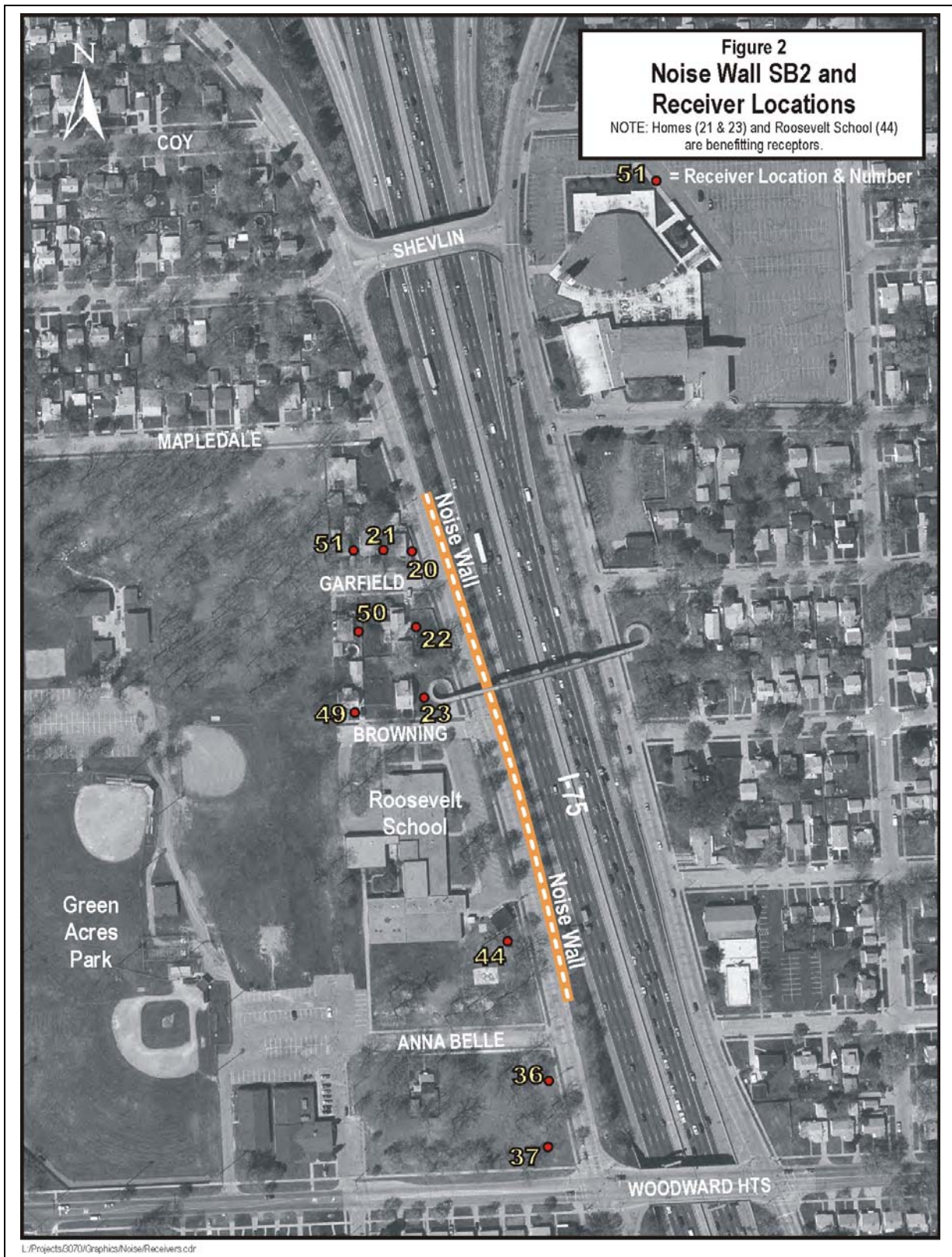
Response: A reevaluation of the data and results in the southwest quadrant of I-696 and I-75 was undertaken and a reconfiguration of the FEIS noise wall was found reasonable and feasible. During the course of the study, elements of Michigan's Noise Policy were clarified. Churches and schools were given special status, but the method of calculating benefits changed over the course of the project. In the final analysis, churches and schools may be counted as the equivalent of 10 dwellings units in determining whether walls are reasonable and feasible. But to be counted in this manner, they must have an adjacent benefiting dwelling unit.

In the FEIS, wall SB2 was not considered reasonable and feasible. A review of the analysis found that by adjusting wall SB2, two homes north of the school can benefit, which allows the school to be counted as ten units. (Figure 2 shows the homes and the extent of the revised wall.) The homes are on the north side of West Garfield and north side of West Browning Avenue. The latter street separates the school from the residences to the north. Thus, wall SB2 is now considered reasonable and feasible.

In executing the TMN2.5 noise model again, the wall was lengthened as much as possible to the north, while still meeting the per unit cost criterion of \$34,772 (2004 dollars). It now would extend north to midway between Garfield and Mapledale.

The wall cannot be extended south to protect the area of new homes noted by the city of Hazel Park. Half of the new homes front onto Woodward Heights (a local arterial street) and so a wall placed between the service drive and I-75 would not abate the noise these homes receive from Woodward Heights, because it would not be between the homes and Woodward Heights. Meanwhile, a noise wall placed between the service drive and I-75 could only reach halfway down the block between the school and Woodward Heights. The wall could not be extended any further south toward Woodward Heights because vehicles must be able to have a clear line-of-sight as they approach the Woodward Heights intersection. Because the wall can reach no further south, and cannot abate noise from Woodward Heights, it cannot benefit any receivers south of the school. This means it cannot feasibly and reasonably be justified beyond the south limit of the school. As a result, there would be no noise abatement for the area of new homes on the north side of Woodward Heights. The benefiting receivers are all north of the school.





## **Road Commission for Oakland County (RCOC) - Single Point Urban Interchange (SPUI)**

Comment: The Road Commission for Oakland County supports the findings of the FEIS, but advocates development of a SPUI at 12 Mile Road.

Response: Table 3-5 of the FEIS shows a 2025 PM peak hour Level of Service of C at the reconstructed partial cloverleaf interchange. This is part of the Selected Alternative, and includes the intersections at the ramp ends on the east and west sides of I-75. The single intersection associated with the SPUI would also perform at LOS C in the same future peak hour. They perform the same on the basis of traffic. A preliminary planning cost estimate found that the modified partial cloverleaf would be approximately \$3.8 million less expensive than the SPUI. Section 3.9 of the FEIS states that reconstruction of the 12 Mile Road interchange will be subject to review again during the design and value engineering phases, and consideration of a SPUI design will be examined again at that stage.

## **City of Royal Oak, Individuals, and Oakland County Board of Commissioners - Increased Traffic on Lincoln Avenue**

The comment of an individual is addressed first and the concerns of Royal Oak and the Oakland County Board of Commissioners thereafter.

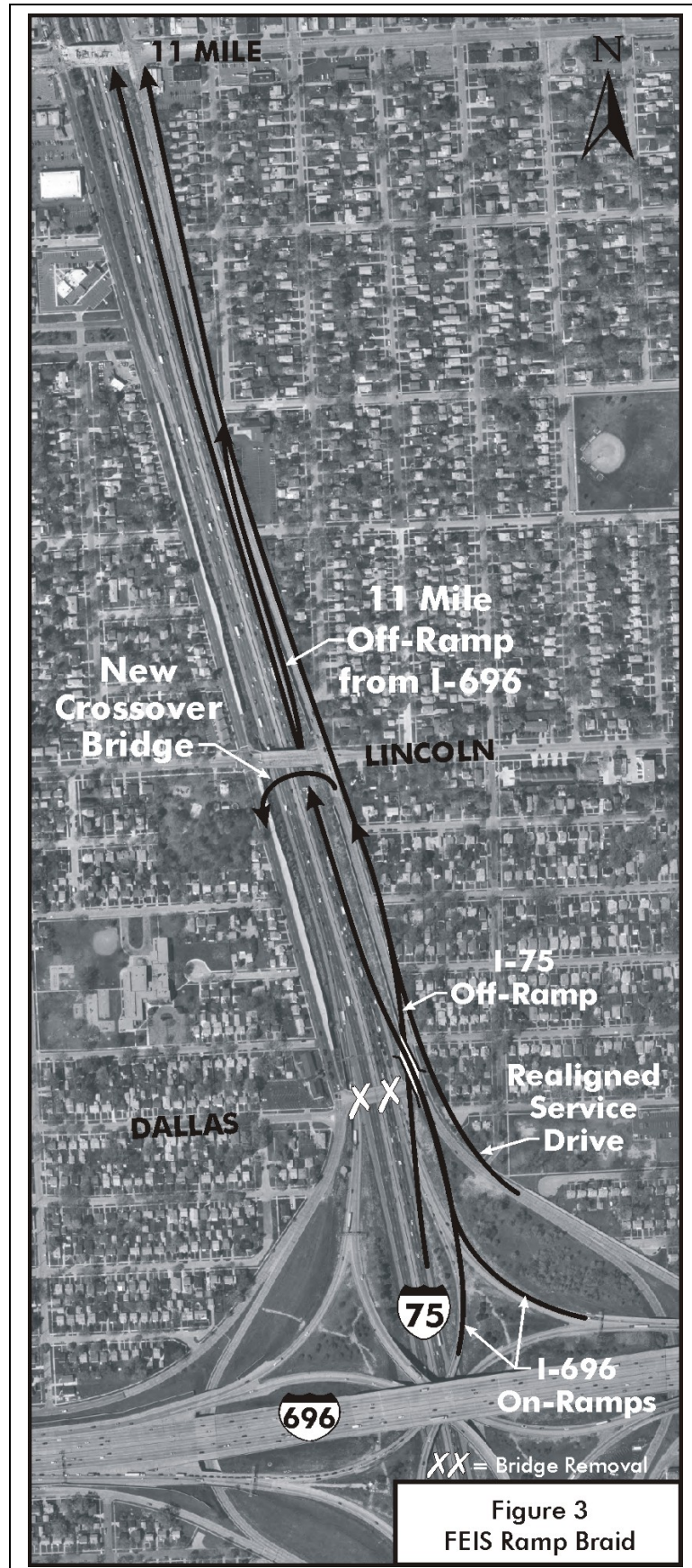
Comment: A letter from a private citizen states that the available access from northbound I-75 to Lincoln Avenue will ruin it as a local neighborhood street, that Lincoln will become the shortest link to downtown Royal Oak, and that the diversion from 11 Mile Road will negatively affect Royal Oak's businesses.

Response: If the destination of the traffic that is attracted to Lincoln Avenue is downtown business, it is not clear how Royal Oak's businesses will suffer. Further, Lincoln Avenue is a collector road that traverses Southfield, Oak Park, Huntington Woods, Royal Oak and Madison Heights, a distance of eight miles. It serves not only residential purposes, but also adjacent neighborhood businesses, light industries and manufacturing centers through these communities. It is a collector road in SEMCOG's roadway network. That means its function is to collect traffic from local neighborhood streets and carry it to arterial streets. Additional information is provided in the response to the next comment.

Comment: A city of Royal Oak resolution dated August 1, 2005, states, "Therefore, be it resolved that the City of Royal Oak wishes to reserve the option of not having the Lincoln Bridge rebuilt amongst other possible considerations." Two letters, four emails, and 39 opposition forms were submitted, principally by those living on, or near, Lincoln Avenue in Royal Oak. The Oakland County Board of Commissioners adopted Resolution #05148, August 18, 2005, recommending that MDOT "address and mitigate the effect of additional traffic on Lincoln in the possible design of the Lincoln Road exit."

Response: These comments are based on a concern that the revised FEIS braid design (Figure 3) will increase westbound traffic on Lincoln Avenue in Royal Oak. Braiding the I-75 northbound off ramp and I-696 on ramps to prevent conflicts in the resulting weave area was found to be the single most important component to travel flow and safety of the Selected Alternative. Of the 18 one-way project miles, this section of I-75 has the third highest crash rate of any section between M-102 and M-59, and the section to the south has the second highest crash rate.





This response covers: 1) the Selected Alternative braid design; 2) a special traffic analysis of Lincoln Avenue prepared for this ROD that has examined alternative future scenarios at Lincoln Avenue; 3) Lincoln Avenue's role in support of emergency access; 4) Lincoln's Avenue's function in the area's transportation network; and, 5) the analysis conclusion.

#### Selected Alternative Braid Design

The DEIS braid design did not allow access to 11 Mile Road from the eastbound and westbound off ramps from I-696. Royal Oak and Madison Heights objected to that design in their comments on the DEIS, stating that it was important to their businesses along 11 Mile Road that access be provided from I-696 as well as I-75. The access was reinstituted as a result of additional local coordination and design review and included in the FEIS braid design. As expressed in their comments on the FEIS, Royal Oak continues to be concerned about the northbound I-75 exit, which has been planned to occur prior to Lincoln Avenue (Figure 3) from the time of the DEIS on. That exit position has not changed from the design presented in the DEIS.

The northbound I-75 exit ramp must tie to the northbound service drive prior to Lincoln Avenue. There are two areas where a ramp can tie into the northbound service drive in the section north of I-696: 1) between I-696 and Lincoln Avenue; and, 2) between Lincoln Avenue and 11 Mile Road. The "exit area" to the service drive between Lincoln Avenue and 11 Mile Road is occupied by the exit from the I-696 ramp collector distributor (CD) road. This means that the exit from I-75 must occur prior to Lincoln Avenue.

Vehicles on the northbound service drive can make a left turn at Lincoln Avenue today. Vehicles from northbound I-75 cannot, as they exit north of Lincoln Avenue. The braid design of the Selected Alternative, like the braid design presented in the DEIS, provides the opportunity for vehicles from northbound I-75 to turn left at Lincoln Avenue, if that turn were not prohibited by Royal Oak. If the turn were not allowed, the existing turn opportunity would be eliminated. Other pertinent information related to this location follows.

- The Selected Alternative requires the removal of the Dallas Avenue Bridge because of a vertical conflict with the new northbound I-75 off ramp. This is unchanged from the DEIS. The existing Dallas Bridge is a back-to-back U-turn bridge that acts to provide continuity of the westbound service drive serving I-696. A motorist today can follow the westbound service drive along I-696 across I-75.
- In order to maintain the westbound I-696 service drive continuity, a new bridge is included in the Selected Alternative south of, and adjacent to, the Lincoln Avenue Bridge. This will be a U-turn bridge for northbound service drive to southbound service drive movements, replacing the function of the Dallas Avenue Bridge (although the new bridge does not provide the southbound service drive to northbound service drive U-turn function – that function will occur at Lincoln Avenue, as the volume is fewer than 30 vehicles in the peak hour).
- The northbound service drive at Lincoln Avenue is a local road within the city of Madison Heights. It will be reconstructed as part of this project.
- The Lincoln Avenue intersections with the north- and southbound service drives are signalized.
- Lincoln Avenue west of the northbound service drive is a collector road under the jurisdiction of the city of Royal Oak. The southbound service drive is also under the jurisdiction of Royal Oak.

- The Selected Alternative will reconstruct and lengthen the Lincoln Avenue Bridge.

While MDOT addressed in the FEIS the issue of access to 11 Mile Road and other issues by modifying the braid design presented in the DEIS, the Lincoln Avenue left turn noted as an issue in the DEIS (see Letter 9a and Resolutions 9b and 9c on pages 6-56 to 6-69 of the FEIS) continued. In its comments on the DEIS, the city of Royal Oak estimated new traffic on Lincoln Avenue would be 399 vehicles a day in both directions. (Comment 9-4 on page 6-60). If this were so, and a ten percent peak hour volume were presumed, the increase in traffic on westbound Lincoln Avenue would equal one vehicle every three minutes. Per Royal Oak's request, a traffic analysis was performed to address that estimate and determine future traffic patterns under several possible options.

#### Traffic Analysis of Lincoln Avenue

The following paragraphs summarize a traffic analysis performed specifically to address the Lincoln Avenue traffic issue.<sup>3</sup> The traffic analysis report has full data on the alternative modifications examined.

Traffic was counted in 2004 and 2005 in Royal Oak and Madison Heights in the Lincoln Avenue/11 Mile Road area. Peak hours were established and existing signal timings were measured. Ramp and mainline traffic data were obtained from MDOT automatic daily traffic count recorders and permanent traffic recorders. Existing traffic is shown in Figure 4.

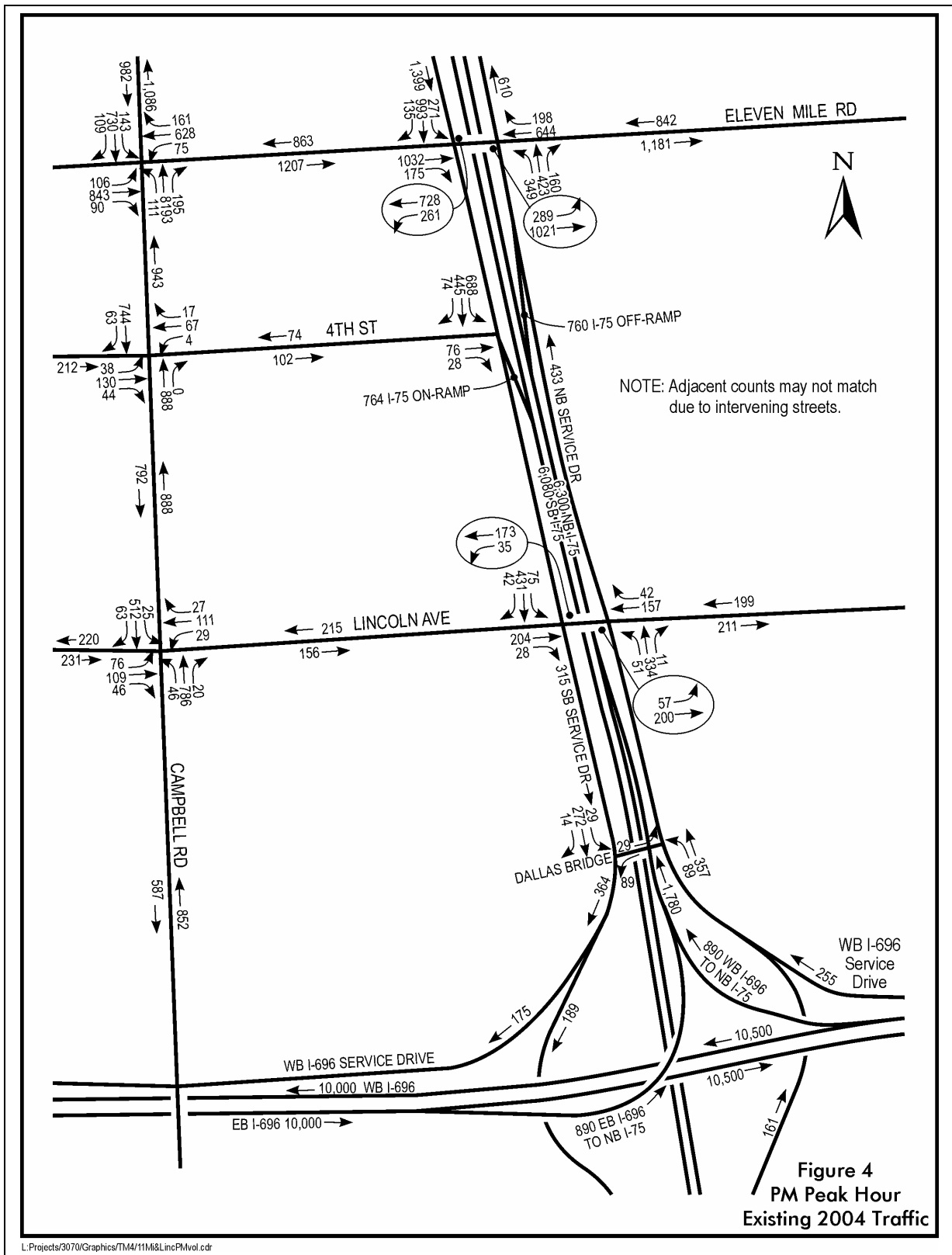
An origin-destination survey was also conducted in the morning and afternoon of June 2004, to determine how vehicles move through the ramp system from I-696 and I-75 to 11 Mile Road, so that the future traffic patterns could be estimated. In the PM peak (two hour) period, 39 percent of vehicles using the 11 Mile Road off-ramp come from eastbound or westbound I-696 and 61 percent come from northbound I-75 (Figure 4).

A microsimulation model called SYNCHRO/SIMTRAFFIC uses the traffic data described above, geometric data, and traffic control device information to calculate measures of performance of local roads and intersections (Campbell on the west, John R on the east, 11 Mile on the north, and I-696 westbound service drive on the south). The 2000 Highway Capacity Manual (HCM) and the microsimulation tool were used to perform a baseline capacity analysis. Overall, the existing local system is functioning efficiently at a Level of Service (LOS) C or better, with a maximum Volume/Capacity ratio of 1.01 in the PM peak hour at Campbell and 11 Mile Road. The northbound service drive at Lincoln and at 11 Mile Road operates at LOS B. Lincoln Avenue west of I-75 carries approximately 440 vehicles, almost equally split between eastbound and westbound. (Note these are the volumes on the west leg of the intersection of the southbound service drive and Lincoln Avenue. Volumes vary along the link due to driveways and local cross streets.)

Traffic was increased 25 percent to reflect future (2025) conditions, and several future scenarios were examined (Table 2 and Figure 5). In examining future potential turns at Lincoln Avenue, the existing pattern of turns at 11 Mile Road was used. For the Selected Alternative it was assumed that half of the traffic now using 11 Mile Road would use Lincoln Avenue. It is unlikely the proportion would be this high, but this was analyzed as a worst case scenario. It is important to note that changing Lincoln Avenue's access would increase local traffic in other locations.

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<sup>3</sup> *Technical Memorandum No. 4, I-75 at Lincoln Avenue Alternatives*, The Corradino Group, October 2005.

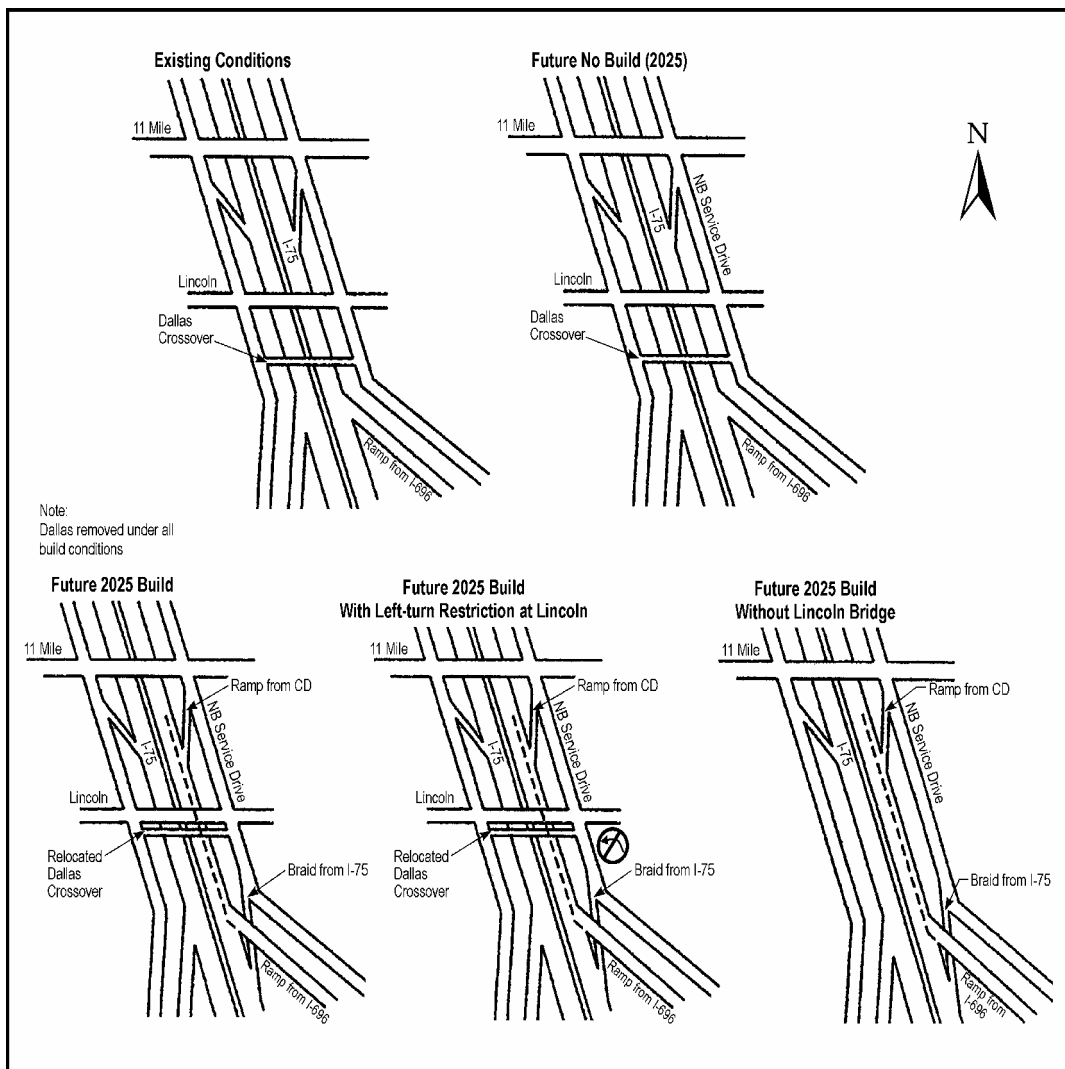


**Table 2**  
**Summary of Scenarios Analyzed**

SCENARIO	LINCOLN CURRENT CONDITION	DALLAS BRIDGE RELOCATED	LINCOLN AVE LEFT TURNS RESTRICTED	LINCOLN AVE BRIDGE REMOVED	FUTURE TRAFFIC GROWTH	REDISTRIBUTION OF TRAFFIC
Existing Conditions	X					
Future 2025 No Build	X				X	
Future 2025 Build (Selected FEIS Alternative)	X	X			X	X
Future 2025 Build with Left- Turn Restriction (LTR) at Lincoln		X	X		X	X
Future 2025 Build without Lincoln Bridge				X	X	X

Source: The Corradino Group of Michigan, Inc.

**Figure 5**  
**Line Drawings of Scenarios Analyzed**



Source: The Corradino Group of Michigan, Inc.

Under no build conditions, the 25 percent growth in background traffic results in a deteriorating LOS at Campbell and 11 Mile Road (LOS E) in the afternoon peak hour, but the intersections of the I-75 northbound service drive at Lincoln and at 11 Mile Road remain at a LOS of B or C. Table 3 summarizes the LOS and V/C information for pertinent local intersections under all the future scenarios in the AM and PM peak hours. Where the V/C ratio is greater than 1.0 or the LOS is E, there is yellow highlighting. Of note is that for most intersections, and most scenarios, there is little difference. The most notable changes occur as a result of the assumed 25 percent growth in background traffic. When comparing the various future scenarios, the data that stand out most are those for the intersection of 11 Mile Road and the I-75 northbound service drive for the “without Lincoln” scenario. The future PM peak hour V/C ratio under this scenario jumps to 1.06, from 0.70 under no build conditions. This is logical, as closing Lincoln Avenue pushes traffic to 11 Mile Road, including local traffic that now crosses into Royal Oak via Lincoln Avenue. While the LOS of the intersection of the northbound service drive and 11 Mile Road falls only from B to C, based on delay, the V/C ratio indicates that individual movements within the intersection can fail, and the intersection overall is much less stable.<sup>4</sup>

If Lincoln Avenue were closed (bridge removed), individual movements at the intersection of the northbound service drive and 11 Mile Road would fail by 2025. In the AM peak hour these include the northbound left turn and through movement, and the eastbound to northbound left turn. In the PM peak hour the northbound left turn would fail. These failures suggest that lane additions may be needed, which would require right-of-way acquisition.

Traffic on westbound Lincoln Avenue west of I-75 would increase with the Selected Alternative. The estimated 215 vehicles today in the PM peak hour would grow to 270 (assumed 25 % background growth to 2025) under no build conditions, then another 107 vehicles with the northbound I-75 off ramp positioned as planned in the Selected Alternative (worst case scenario, assuming half the traffic uses Lincoln, rather than 11 Mile Road). The 107 additional vehicles equate to fewer than two additional vehicles per minute.

#### Lincoln Avenue Emergency Access

The Royal Oak Fire Department, in their comments on the DEIS, stated that “the Dallas Avenue Bridge should not be removed,” as “it is needed as a lookout point to locate life safety problems in the I-75/I-696 interchange” (see FEIS, Comment 9.2 page 6-61), and the Police Department stated it “should not be removed because the removal of the Dallas Bridge over I-75 will increase South End police response times between Royal Oak and Madison Heights Police Departments” (Comment 9-2, page 6-62). These statements of maintaining vantage points and access across I-75 are not consistent with Royal Oak’s Council Resolution of August 1, 2005, “to reserve the option of not having the Lincoln Bridge rebuilt amongst other possible considerations.” The Dallas Bridge must be removed to construct the braid. Several options were examined, but removal of the Dallas Bridge was the only one consistent with federal interstate design standards. The Lincoln Bridge does not need to be removed and can continue to support emergency service use, which was specifically identified as a need by Royal Oak in their comments on the DEIS cited above. The function of the Lincoln Avenue Bridge becomes more important with the removal of the Dallas Bridge.

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<sup>4</sup> The Level of Service is based on delay. If the volume of an individual movement is exceeded, the traffic will eventually advance and move through the intersection, but only after a delay. Thus, when all the movements of an intersection are considered in total, delay may be acceptable, but individual movements can still exceed capacity, leading to unstable conditions.



**Table 3**  
**Summary of Measures of Effectiveness for Scenarios**

INTERSECTION DESCRIPTION	EXISTING CONDITIONS			FUTURE 2025 NO BUILD			FUTURE 2025 BUILD WITH LINCOLN			FUTURE 2025 BUILD WITH LTR			FUTURE 2025 BUILD WITHOUT LINCOLN		
	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C
AM PEAK HOUR															
Lincoln and I-75 SB Service Drive	B	10.6	0.17	B	10.2	0.21	B	12.1	0.26	B	10.6	0.25	B	10.1	0.10
Lincoln and I-75 NB Service Drive	A	7.9	0.25	A	7.9	0.31	B	13.6	0.48	B	14.0	0.48	B	13.9	0.57
11 Mile and I-75 SB Service Drive	B	19.1	0.64	C	21.4	0.76	B	18.9	0.77	B	19.4	0.78	C	21.3	0.86
11 Mile and I-75 NB Service Drive	C	23.4	0.82	D	41.3	0.98	D	40.9	1.00	D	40.9	1.00	E	67.2	1.09
Dallas and I-75 SB Service Drive	A	6.3	0.14	A	6.7	0.18	A	9.6	0.09	B	11.4	0.09	A	4.7	0.09
Lincoln and Campbell	B	10.1	0.37	A	6.5	0.47	A	9.1	0.51	A	9.2	0.52	B	11.8	0.64
Lincoln and John R.	B	14.2	0.28	B	10.2	0.34	A	9.3	0.34	A	9.6	0.34	B	10.7	0.36
Lincoln and Helene	B	10.6	0.12	B	10.4	0.15	A	9.2	0.25	B	10.0	0.20	B	12.8	0.28
11 Mile and Campbell	C	22.8	0.87	C	32.4	1.41	C	32.1	1.26	D	36.9	1.26	E	61.5	1.82
11 Mile and John R.	C	27.2	0.56	C	25.7	0.77	B	12.0	0.61	B	12.3	0.61	B	14.4	0.61
11 Mile and Hampden	B	10.4	0.53	B	10.1	0.65	A	7.2	0.65	A	7.2	0.65	A	7.3	0.67
Fourth Street and Campbell	A	6.8	0.29	B	10.9	0.35	A	8.9	0.36	A	8.7	0.36	A	8.8	0.41
NB I-75 Service Drive and I-696 Service Drive	B	13.3	0.16	A	6.8	0.20	A	5.7	0.20	A	5.7	0.20	A	5.9	0.20
PM PEAK HOUR															
Lincoln and SB I-75 Service Drive	B	11.4	0.32	A	9.2	0.39	B	13.5	0.47	B	10.9	0.42	B	18.0	0.48
Lincoln and NB I-75 Service Drive	B	19.6	0.26	B	10.8	0.32	B	17.7	0.56	B	17.4	0.55	B	15.6	0.57
11 Mile and SB I-75 Service Drive	C	32.5	0.86	D	40.9	1.01	D	43.1	1.01	D	45.8	1.03	D	45.3	1.03
11 Mile and NB I-75 Service Drive	B	16.4	0.58	B	19.7	0.70	C	21.8	0.70	C	21.5	0.74	C	30.0	1.06
Dallas and SB I-75 Service Drive	B	12.2	0.17	B	10.8	0.21	A	7.7	0.14	A	7.6	0.14	A	7.3	0.14
Lincoln and Campbell	B	13.8	0.43	A	8.6	0.55	B	10.6	0.61	B	10.9	0.61	A	9.6	0.62
Lincoln and John R.	B	18.9	0.46	B	10.3	0.54	B	11.7	0.56	B	11.6	0.56	B	11.7	0.60
Lincoln and Helene	B	17.5	0.17	B	10.9	0.21	A	8.9	0.34	B	11.3	0.25	A	7.8	0.34
11 Mile and Campbell	C	26.3	1.01	E	57.2	1.98	E	56.5	1.98	E	56.7	1.98	D	51.0	1.83
11 Mile and John R.	C	31.8	0.72	D	36.5	0.89	D	39.2	0.90	D	39.2	0.90	D	53.4	0.98
11 Mile and Hampden	A	6.5	0.44	A	8.0	0.52	A	4.9	0.53	A	5.6	0.53	A	9.9	0.54
4th Street and Campbell	A	9.2	0.37	B	11.9	0.46	B	11.3	0.46	B	11.8	0.46	B	10.5	0.46
WB I-696 and NB I-75 Service Drive	B	15.0	0.11	A	7.4	0.13	A	8.1	0.15	A	7.5	0.13	A	6.3	0.13

Note: Yellow highlighting shows situations where the Volume/Capacity ratio is greater than 1.0 and where the LOS is E.

Source: The Corradino Group of Michigan, Inc.

Madison Heights, Royal Oak, Hazel Park and Ferndale are currently working together to consider pooling their police, fire, and other emergency services, to improve services and reduce response times. Maintaining access across the Lincoln Bridge would appear important to those multi-jurisdictional efforts. If the Lincoln Avenue Bridge were removed, the 11 Mile Road Bridge is the next opportunity to cross I-75. Removal of the Lincoln Avenue Bridge would act to nullify any improvement the multijurisdictional effort might gain and would hinder life saving activities.

#### Lincoln Avenue Function in the Transportation Network

In SEMCOG's regional transportation model, Lincoln Avenue is shown as a "collector" road. This means it is a step above a local road and is, therefore, intended to accumulate and distribute local traffic. The only other road so designated in Royal Oak south of 11 Mile Road is 4th Street. When it was proposed in the DEIS to eliminate access to the southbound entrance from 4th Street to I-75, Royal Oak objected. MDOT modified the preliminary design to maintain the connection from 4th Street to the southbound I-75 on ramp. The basis of the objection was the need for emergency vehicles to get to I-75 and the concern that traffic would be diverted away from 4th Street to local streets. That is, 4th Street was expected to be the collector road carrying traffic, rather than shifting that traffic to adjacent local roads. Lincoln Avenue, like 4th Street, is a collector, and should be expected to collect local traffic. If Lincoln Avenue were closed, local traffic would divert to other local north-south roads such as Helene, Minerva, Edgeworth, Kenwood and others to get to/from 11 Mile Road. Additionally, 11 Mile Road between Woodward and I-75 is considered a county primary road.

Lincoln Avenue is a "half mile" road. Ten Mile Road is to the south and 11 Mile Road is to the north. Lincoln Avenue is a continuous link between Southfield, Oak Park, Huntington Woods, Royal Oak and Madison Heights. Locally, it connects Woodward Avenue (M-1) to the west and I-696 to the east, where there is an interchange connection at Dequindre (the road separating Oakland and Macomb counties). Again, it functions as a collector road.

Some motorists enter Royal Oak by exiting I-696 westbound at Lincoln Avenue/Dequindre and traveling westbound over Lincoln Avenue through Madison Heights to Royal Oak. This is a direct route from the last exit ramp on westbound I-696 before I-75. The reverse pattern is also true. This movement reduces demand on other entry points to Royal Oak, including Mohawk Avenue. Earlier, there was opposition to the DEIS braid design because of a perceived increase in traffic on Mohawk. Closing the Lincoln Avenue Bridge would push more traffic to Mohawk. It would also sever a pedestrian link over I-75, and school buses that use Lincoln Avenue would have to be rerouted.

A trip generation analysis performed in conjunction with the Lincoln Avenue traffic analysis indicates the extent of locally generated traffic in southeast Royal Oak. In the area bounded by Campbell on the west, I-696 on the south, I-75 on the east, and Lincoln on the north, an estimated 800+ trips are generated by homes in the PM peak hour. These trips have a limited number of routes into and out of the neighborhood. Closing Lincoln Avenue would reduce travel options and force the traffic now using Lincoln Avenue to other streets.

#### Analysis Conclusion on Lincoln Avenue

Because Lincoln Avenue and the service drives are under the jurisdiction of Royal Oak, that city could, at any time, chose to make Lincoln Avenue a right-in, right-out intersection at the southbound service drive. Likewise, left turns could be prohibited at Lincoln Avenue and the

northbound service drive. These actions would restrict the movements that presently occur there, as well as any future movements brought about by the ramp change. These changes to Lincoln Avenue would not require state or federal approvals.

A meeting was held October 21, 2005, with Royal Oak, Madison Heights, Oakland County, and FWHA to discuss the Lincoln Avenue Bridge. The traffic analysis results were presented. After discussion, the Selected Alternative continued to be accepted with the Lincoln Bridge left intact. Correspondence related to the conclusions of the meeting is in Appendix C.

MDOT has a responsibility to a broad public. The Lincoln Avenue Bridge serves a constituency larger than Royal Oak alone. The benefits of the Selected Alternative braid will accrue to the 8,000 motorists that use that braid each day, as well as the tens of thousands of motorists on northbound I-75 and on I-696. Relieving the congestion on northbound I-75 and on I-696 will also keep more motorists on the freeways and reduce pressure on service drives, collectors, and local roads. Safety will improve. Leaving the Lincoln Avenue Bridge in its place, relocating the Dallas Crossover Bridge, and constructing the improvements to I-75 will benefit the adjacent communities, motorists, and the entire system. Improvements will reduce the number of crashes, increase efficiency, alleviate congestion, and promote carpooling.

For these reasons, MDOT plans to proceed with the braid design of the Selected Alternative as presented in the FEIS. This design will be reexamined in the design phase, which will continue to include involvement of local communities. As stated previously, Royal Oak has the option of taking local action by restricting left turns onto Lincoln Avenue at the northbound service drive or movements into Lincoln Avenue at the southbound service drive intersection.

#### **Individual - Increased Traffic at Maddock Park in Royal Oak**

Comment: A private citizen takes exception to the determination on page 4-66 of the FEIS that there will be no effect on Maddock Park.

Response: The increase in traffic volume on Lincoln Avenue of one to two vehicles per minute in the peak hour is not considered to have a significant effect on Maddock Park.

#### **Individual - Selected Alternative is Inconsistent with the Royal Oak Master Plan**

Comment: A private citizen states the Selected Alternative “runs counter to Royal Oak’s master plan,” citing several points. OBJECTIVE 1.1 is to “preserve, maintain and enhance the character of existing neighborhoods.” OBJECTIVE 1.4 is to “promote safety and security through the management of traffic volumes and speeds which are detrimental to residential neighborhoods.” GOAL 4 is “to improve both the function and visual appearance of the major commercial corridors within Royal Oak while protecting and enhancing neighboring residential areas.”

Response: The addition of one to two vehicles per minute to Lincoln Avenue, which is a collector road built before the neighborhoods were fully developed around it, is not expected to result in a deterioration of the character, safety or security of the residential neighborhoods. Neither is it expected to have an effect on the function or visual appearance of the major commercial corridors.

## **Individual - Reassertion of Previous Comments on DEIS**

Comment: An individual commenter states the FEIS does not address comments made on the DEIS and is “woefully deficient in satisfying the broad requirements of the National Environmental Policy Act and the rules of the Council of Environmental Quality.”

Response: Both the DEIS and FEIS are FHWA documents. They were specifically reviewed by FHWA for legal sufficiency and NEPA requirements. The I-75 FEIS was signed on May 31, 2005. NEPA requires a “hard look” at the reasonably foreseeable actions and environmental consequences of proposed alternatives before decisions are made and before actions are taken. “Reasonably foreseeable” generally means based on the best available data and does not require speculation or the determination of a selected future. NEPA requirements ensure that this environmental information is available to public officials and citizens.

## **City of Ferndale**

Comment: The FEIS neglects Ferndale’s concerns and recent university research that fine particulate matter generated by vehicles contributes significantly to increased heart problems, aggravates asthma, and is a carcinogen, with the FEIS stating there are no standards.

Response: See response in Section 6.3.13 on page 6-18 in the FEIS. There are no standards for air toxics. There are PM<sub>2.5</sub> annual and 24-hour standards, but there is no guidance with respect to project level analysis. The analyses that were completed were consistent with FHWA and U.S. E.P.A. requirements.

Comment: The FEIS offers no specific noise mitigation plans.

Response: Noise mitigation plans are outlined in Section 4.8.5, Table 4-14 and the “Green Sheet” of the FEIS. It should be noted that Ferndale has no frontage on I-75, being more than 600 feet from I-75 at its closest point. In that area, the reconsideration of wall SB2 has been found to be reasonable and feasible, as noted on page 8 of this document.

Comment: The FEIS does not adequately address the issue of 10-foot wide inside shoulders.

Response: The inside shoulder width was addressed specifically in Section 3.7.3 of the FEIS and was responded to in Section 6.3.9 of the FEIS comments section. Ten-foot inside shoulders meet American Association of State Highway and Transportation Official (AASHTO) standards and match the roadway cross-sections to the north and south on I-75. Twelve-foot shoulders would result in significant social and environmental impacts and were not considered reasonable in the Selected Alternative.

Comment: The expansion of I-75 should be deferred until MDOT, SEMCOG and the region agree on a strategic and financial plan.

Response: SEMCOG has an approved long-range transportation plan in place. MDOT’s 2005-2009 Five Year Transportation Program is approved and is updated each year. MDOT is about to embark on an update of its 2005 to 2030 State Long Range Plan and has ongoing activities, including public involvement supporting Plan development. The project’s status with respect to MDOT’s and SEMCOG’s plans is covered in Section 1.6 of the FEIS.

Comment: There is no adequate construction mitigation plan. The remedy is to first construct a rapid transit system on Woodward Avenue.

Response: This issue was addressed in the FEIS (Section 4.2.4) and will be further refined during the design phase with local coordination. See specific responses in Section 6.3.20 and Response 8.11 in Section 6.4.8. The maintenance of traffic program will be developed through local coordination during future phases of the project in order to minimize impacts to the greatest extent possible. Mitigation will also then be reevaluated.

## **Madison Heights**

Comment: Enforcement of HOV lanes should be the responsibility of the State Police.

Response: As Madison Heights acknowledges, the FEIS responded to this comment. (See response 8.1, Section 6.4.8.) There is no new information to present. Additional funding sources for enforcement activities will be explored in future phases of this project.

Comment: The FEIS does not specifically address the conveyance of the proposed new storm drainage to Dequindre. The exact location of the proposed storm pipe must take into account the surface and subsurface facilities that occupy the intended route.

Response: Comment acknowledged. The exact location will be determined in a more detailed drainage study in the design phase.

Comment: The City continues to recommend that a dedicated I-75 access lane be an extension of a westbound right-turn lane out of Home Depot on 12 Mile Road.

Response: Unfortunately, such a lane does not meet design criteria. Detailed analysis and discussions between MDOT and FHWA were held on this issue and such a lane was found not to be viable for inclusion in the Selected Alternative. See response 8.4, Section 6.4.8 of the FEIS for specifics.

Comment: The City plans to install a sidewalk this summer on the south side of 14 Mile Road from Concord to Stephenson Highway and provide maintenance overlays for portions of the service drive at the I-75/I-696 interchange. The City requests these expenditures be credited toward any local contribution that may be required by the I-75 project.

Response: For specifics, see responses 8.6 and 8.7 in Section 6.4.8 of the FEIS. The I-75 improvements are still unfunded.

Comment: Comments on nonmotorized access are repeated, noting that the non-motorized path requested north along the east side of I-75 from the Gardenia area to 14 Mile Road not be predicated on the referenced countywide nonmotorized plan.

Response: When there is an approved countywide non-motorized plan, this non-motorized access will be considered. See responses 8.8 and 8.9 in Section 6.4.8 of the FEIS.

Comment: The FEIS is non-responsive regarding the cost of projects related to the I-75 expansion.

Response: There are no such related projects in Madison Heights. See responses 8.10 and 8.11 in Section 6.4.8 of the FEIS.

Comment: The FEIS does not address the cost to local jurisdictions for impacts on adjacent streets and communities during construction. The process must include analysis of closing/restricting access to side streets during construction, as well as on a permanent basis.

Response: These details will be coordinated by MDOT and the local jurisdictions during further phases of the project. Response 8.11 in Section 6.4.8 of the FEIS does not change.

Comment: The City supports efforts to reduce the impacts to properties in Madison Heights during the design phase.

Response: Comment acknowledged.

Comment: The City recommends additional evaluation of the existing and proposed sound walls and opposes transferring responsibility for maintenance and reconstruction of the walls to the City.

Response: The Selected Alternative replaces the existing walls in Madison Heights, in kind, where they would be removed by the improvements to the I-75/I-696 interchange. Ownership and maintenance are a function of the statewide policy on noise walls and are not negotiable.

Comment: The City continues to support use of land area freed up by new interchanges for private economic development and any proceeds of sales be credited toward the local contribution.

Response: Property at interchanges has been purchased for transportation purposes. Any excess property will continue to be used for transportation purposes, such as carpool lots or detention ponds. See response 8-15 in the FEIS.

### **Transit Riders United (TRU)**

This organization commented on the FEIS in a manner substantively the same as their comments on the DEIS. Where comments were new, they are summarized and responded to below.

### **Purpose/Need and Alternatives**

Comment: There has been a systemic failure by the officials of MDOT and SEMCOG to ask the programmatic policy questions that ought to be addressed in any given corridor, and the purpose and need is flawed. It is imperative that induced demand be taken into account. Part of the rationale for the project is that Oakland County is a leading job producer, but this is not the correct rationale. Using transportation modeling with land-use feedback is critical to properly characterize options. They all predict lower vehicle miles of travel growth than the typical traffic model, making the expansion project unnecessary.

Response: Programmatic policy questions are addressed in MDOT's and SEMCOG's long range planning processes. The status of the project is addressed in Section 1.6 of the FEIS. The Selected Alternative is consistent with SEMCOG's 2030 *Regional Transportation Plan*, with construction scheduled for the 2011-2015 time period. It also meets the *MDOT's State Long*

*Range Plan 2000-2025* goals. The tools used in all the analyses are approved by the U.S. E.P.A., SEMCOG, MDOT, and FHWA. The CEQ Regulations at 1502.13 make it clear that the Purpose and Need statement “shall briefly specify the underlying purpose and need to which the agency is responding in proposing alternatives including the proposed action.” This has been consistent throughout the development of the DEIS and FEIS. The need for additional capacity on I-75 was demonstrated in a 2000 feasibility study<sup>5</sup> and the DEIS, and even after diversion was maximized to a high quality rapid transit system tested in the Woodward Corridor. The test of transit viability included adding an extensive feeder bus service at frequent intervals through much of Oakland County. The system was developed to give every opportunity to capture potential transit ridership and divert trips from automobiles. Nevertheless, the project need remained. Meanwhile, as documented in the FEIS, travel demand already exceeds capacity on I-75.

### **Safety**

Comment: Commuting on a train or bus is safer than commuting by car.

Response: Comment acknowledged.

### **Construction Mitigation**

Comment: No adequate construction mitigation plan has been proposed. The remedy is to first construct a rapid transit system on the Woodward Corridor to provide congestion mitigation during the construction process.

Response: The maintenance of traffic program will be developed through local coordination during future phases of the project in order to minimize impacts to the greatest extent possible. Mitigation will also then be reevaluated. Response 8.11 in Section 6.4.8 of the FEIS does not change.

### **HOV Lane Enforcement and High Occupancy Toll (HOT) Lanes**

Comment: The FEIS should be rejected for not outlining a permanent, dedicated source of revenue to enforce the HOV lane. The expansion project should be paid for by users by establishing a HOT lane instead of an HOV lane.

Response: Identification of responsibilities related to enforcement will be examined in future phases of the project and at the onset of project implementation, which is in the future, as the project is unfunded. Implementation of HOT lanes<sup>6</sup> was considered, but not found feasible.

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<sup>5</sup> *I-75 Corridor Study in Oakland County*, The Corradino Group for the Michigan Department of Transportation, The Southeast Michigan Council of Governments, the Road Commission for Oakland County and the Traffic Improvement Association, November 2000.

<sup>6</sup> The concept of the HOT lane is to offer the option to the public of using the HOV lane for a fee. Any underused capacity in the HOV lane can be filled up by allowing single-occupant vehicles into the lane for a fee. The fee can be adjusted to control the number of additional users, so that a high level of service continues to be provided.

## **Cost Estimates**

Comment: The FEIS is not responsive to TRU's recommended use of a "triple bottom Line" acknowledged in both MDOT's mission statement and the Michigan Land Use Leadership Council's Report.

Response: MDOT's Mission Statement is to "Provide the highest-quality transportation for economic benefit and improved quality of life." There is neither specification as to how the economic benefit is calculated, nor is there a reference to "triple bottom line." Similarly, in the Michigan Land Use Leadership Council's Report there are no references to "triple bottom line." The DEIS and FEIS used accepted professional standards and methodologies to make planning level cost estimates, at this, the planning stage of the study.

## **Unlawful Segmentation**

Comment: As MDOT and the county move to follow through on the numerous connected road expansions envisioned along this corridor, the region loses the potential to better diversify transportation infrastructure at much less cost.

Response: The three elements of 23 CFR 771 related to segmentation: logical termini, independent utility, and full consideration of alternatives have been met. The proposed action connects four-lane sections of I-75 to the north and south and all practical alternatives to meeting the Purpose and Need have been considered. Projects described in the Secondary and Cumulative Effects (Section 4.18) of the FEIS all have independent utility and would be funded on a project-by-project basis. See FEIS response on segmentation in Section 6.3.3, on page 6 –7.

## **Pedestrian and Bicycle Access**

Comment: Certainly pedestrians and bicyclists are impacted by the loss of the Dallas Avenue Bridge. For cyclists I-75 is Oakland County's longest contiguous barrier; only one safe crossing exists between 12 Mile Road and M-59.

Response: Currently, pedestrians and bicyclists are not allowed on the Dallas Avenue Bridge so there is no lost connection. Section 4.2.2 and Table 4-2 of the FEIS outline the improvements in bicycle and pedestrian access that will accompany the project. Six pedestrian bridges would be replaced and meet Americans with Disabilities guidelines. Seven replacement bridges in the south section of the corridor would be replaced and would include sidewalks. I-75 overpasses five roads from 13 Mile Road to Big Beaver that would have new or replacement sidewalks. Bridges further north would maintain or improve the existing conditions for pedestrians or bicyclists.

## **Noise**

Comment: The FEIS provides inadequate documentation of plans for noise attenuation and no predictions of noise increases due to more and faster traffic.

Response: The plans for noise attenuation are found in Table 4-14 of the FEIS, except that, as noted above in this document, wall SB2 (modified) is now considered reasonable and feasible. As stated in the opening paragraph of Section 4.8 of the FEIS, a separate *Noise Study Report* was conducted and was available that includes additional information and the noise analysis model



output. The *Noise Study Report* has been available at all the distribution centers noted in the preface of the FEIS.

### **Increased Air Pollution, Health Effects, and Air Toxics**

Comment: MDOT must study health effects. The no-build alternative has lower CO values than the build alternative. Increased travel speed actually increases CO and VOC emissions. The FEIS is almost silent on the increase in toxic pollutants. TRU requests that the I-75 project expressly address induced travel demand in the regional planning process.

Response: Air quality discussions were held with regulatory agencies and language was coordinated and agreed upon for content in the FEIS. The air quality standards set for mobile sources by the U.S. E.P.A. are based on many health risk studies. The studies are based on the at-risk population (asthmatics, children, and elderly). The air quality analysis performed for the I-75 Project indicates that it will not violate the applicable standards. The project also was found to conform to the State Implementation Plan for air quality by SEMCOG. Further information on air quality is contained in FEIS Section 4.7. There are no air quality standards for air toxics and it is not a requirement of air quality analysis for environmental documentation.

### **Public Comment**

Comment: The project has been unresponsive to public comment received. A number of promises made at the Scoping Meeting of August 29, 2002, were not kept related to: air toxics, population shifts, environmental justice, economic impacts of the HOV lanes, and effects of diesel exhaust on special groups.

Response: The notes from the Scoping Meeting include:

- Air toxics would be addressed consistent with U.S. E.P.A. information. U.S. E.P.A. has accepted the FEIS.
- Population shifts were addressed in the *Indirect and Cumulative Impact Analysis Technical Report* and summarized in Section 4.18 of the FEIS.
- Environmental justice is addressed in Section 4.3 of the FEIS. As noted, the HOV lanes will offer further travel options for those with no vehicle of their own due to increased ridesharing and potential transit use of HOV.
- Regarding economic impacts of the HOV lanes, the HOV lanes are supported by Automation Alley, Oakland County, and others, as they recognize the need to provide alternative means of travel to the workers in Oakland County. The analysis of the economic impacts related to enforcement will occur when the project moves closer to implementation.
- U.S. E.P.A. did note a concern for the effects of diesel on special groups, however, continued discussion among agencies indicates that no health risk assessments will be performed.

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Date

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For the Federal Highway Administration

**Project Mitigation Summary “Green Sheet”  
For the Selected Alternative  
for  
Record of Decision - January 2006  
  
I-75 from M-102 to M-59  
Oakland County, Michigan**

**This updated project mitigation summary “Green Sheet” contains the project specific mitigation measures being considered at this time. These mitigation items and commitments may be modified during the final design, right-of-way acquisition or construction phases of this project.**

<i><b>Impact Category</b></i>	<i><b>Mitigation Measures</b></i>
<b>I. Social and Economic Environment</b>	
a. Pedestrian and Bicycle	Section 4.2.2 and Table 4-2 of the FEIS outline the improvements in bicycle and pedestrian access that will accompany the project. Six pedestrian bridges will be replaced and meet Americans with Disabilities guidelines. Seven bridges in the south section of the corridor will be replaced and include sidewalks. I-75 over five roads from 13 Mile Road to Big Beaver Road will have new or replacement sidewalks. Bridges further north will maintain or improve the existing conditions for pedestrians or bicyclists.
b. Noise	Analysis finds 19 individual reasonable and feasible noise walls, plus replacement noise walls in Madison Heights would total 5.0 miles in length (see FEIS Table 4-14 and Figure 4-5 in the FEIS, plus wall SB2 is now considered reasonable and feasible as shown in Figure 2 in the ROD).
c. Fire Hydrant Access	MDOT will consult with local fire departments during the design phase to ensure adequate placement of, and access to, fire hydrants in locations where noise walls are to be constructed.
d. Visual Effects	Noise wall construction and construction materials will be discussed with the affected public in the vicinity of potential construction during design.
<b>II. Natural Environment</b>	
a. Wetlands	0.4 acres of impacted wetlands in the Square Lake Road Interchange will be replaced by 0.6 acres of wetlands in Armada Township in Macomb County.  A permit will be obtained from the Michigan Department of Environmental Quality for this compensatory wetland mitigation. A preliminary Wetland Mitigation Plan has been approved by MDEQ.
b. Tree Removal/ Clearing/ Landscaping	Mature trees will be preserved within MDOT right-of-way (principally at fence lines), where safety requirements are met. Property owners will be notified before any trees in front of their residences are removed and will be offered replacement trees. Native vegetation will be considered in plantings.
c. Water Quality	For highway runoff, storm water management facilities will include detention basins and grassed channels or swales to reduce the concentration of road contaminants reaching receiving bodies of water. Ditch check dams

c. Water Quality (continued)	<p>will be installed to control runoff velocities. Storm water management will be incorporated into final roadway design.</p> <p>The project will include separation of MDOT storm water south of 12 Mile Road from the combined sewer system that now carries this storm water.</p> <p>Detention will be included in pump stations and possibly within the 12 Mile Road interchange, allowing settling of debris and sediment. Oil/water separators will be included in the system.</p>
III. Hazardous / Contaminated Materials	
a. Contaminated Sites	<p>A <i>Project Area Contamination Survey</i> has been completed. One site has been identified for a Preliminary Site Investigation (PSI) prior to right-of-way acquisition. Any areas of contamination found by that PSI will be marked on design plans.</p> <p>Additional standard mitigation measures that could apply include:</p> <ul style="list-style-type: none"> <li>• Testing/treatment of water from any dewatering operations before pumping to storm drains or surface water discharge points.</li> <li>• Testing of river bottom sediments to determine proper disposal methods.</li> <li>• Preparation of underground utility plans to ensure no deep utility cuts will impact any contaminated areas. Any utility cuts in contaminated areas will be reviewed to ensure proper excavation and backfill methods.</li> <li>• Preparation of a Risk Assessment Plan, which includes a Worker Health and Safety Plan, to reduce dermal exposure and address direct contact issues, if contaminated materials are encountered.</li> <li>• Closing and abandoning any monitoring wells properly.</li> </ul>
IV. Construction	
a. Maintenance of Traffic	Two lanes of traffic will be maintained in both directions at all times on I-75. A Motorist Information Plan (temporary electronic message boards and website) will be developed and implemented during construction to identify lane closures and alternate routes. Coordination with local officials will occur to facilitate emergency services.
b. Vibration	Basement surveys will be offered in areas where vibration effects could occur. These areas will be identified during the design phase, where pavement and bridge removal will occur, or where piling and/or steel sheeting is planned. Impacts are not anticipated at this time.
c. Wetlands	Delineated wetlands are to be included on construction plans sheets, so they can be flagged for avoidance during construction.
d. Parks	Reconstruction of the service drive adjacent to Maddock Park may be necessary. No grading permit will be obtained from the park and access will be maintained at all times.